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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/361,893	07/27/1999	CHRISTOPHER L. MCCRANK	2000.009700	6115
23720	7590	10/06/2003	EXAMINER	
WILLIAMS, MORGAN & AMERSON, P.C. 10333 RICHMOND, SUITE 1100 HOUSTON, TX 77042			CHANG, EDITH M	
			ART UNIT	PAPER NUMBER
			2634	10

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/361,893

Applicant(s)

MCCRANK ET AL.

Examiner

Edith M Chang

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 30 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-15 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 8, 9, 16 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 10-15, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taki (U.S. Patent 5966665) in view of Kung et al. (U.S. Patent 4654859 & Mincher et al. (US Patent 5408506).

Regarding **claim 1**, except to specify implicitly selecting a second radio frequency during a time period within the first time frame, Taki discloses all subject matter claimed: a method and apparatus for transmitting between first and second communication units (10 & 11 FIG.1) of which each comprises a controller (FIG.2) to set the communication over a plurality of radio frequencies (column 7 lines 35-38). They comprise: setting the first and second units to transmit and receive communication over a first radio frequency during a first time frame; setting the first and second units to receive and transmit over the second radio frequency during a second time frame; and selecting a second radio frequency during the first time frame. In column 2 lines 44-54, column 6 lines 15-19, and FIG.4, Taki discloses his method and system that each frame has a frequency from the hop frequencies; in column 4 lines 34-45 and FIG.3, the communication frame structures allow units to transmit and receive at its time frame respectively; and in column 6 lines 15-35, Taki discloses the selecting a next radio frequency during the present time frame.

As in FIG.3 of Taki the frame frequency has to be selected before the TX/RV phase began (52 FIG.3) so that the frame has time to hop to the new frequency (51 FIG.3). However further Mincher et al. teaches the VCO selecting a new frequency during “a time period” in the frame (FIG.8, column 2 lines 5-17). At the time of the invention, it would have been obvious to one of ordinary skill in the art to have Mincher et al.’s “a time period” (dead-time interval) teaching in Taki’s system to maximizing the time available for information transmission (column 2 lines 15-17).

Regarding **claim 11**, Taki discloses all subject matter claimed except implicitly specify using voltage controlled oscillator (VCO) and frequency multiplier to select the second radio frequency further Kung et al. teaches a frequency synthesizer for frequency hopping by using the VCO and the frequency multiplier (FIG.1, column 3 lines 20-28). At the time of the invention, it would have been obvious to one of ordinary skill in the art to have the frequency synthesizer taught by Kung et al. in Taki’s system to have an effective and inexpensive way to select the second radio frequency (column 2 lines 3-10).

Regarding **claims 2-4, & 12**, Taki discloses features cited in these claims: selecting the next (the second or third) radio frequency during the current time frame (the first or second time frame) by controller of each unit to transmit communication between transmitter and receiver (22, 23, 43 FIG.2, column 4 lines 13-18) of the first and second units.

Regarding **claims 5-7, & 13-15**, Taki discloses features cited in these claims, since Taki teaches the frame structures in FIG.3 and column 4 lines 33-49 that the transmitter and receiver of the first and second units can be set to transmit and receive at the time frame at the selected frequency respectively.

Regarding **claims 10, & 18-19**, Taki discloses the first communication unit is a base unit (10 FIG.1, column 1 lines 12-18) and the second communication unit is a remote unit of a cordless telephone (11 FIG.1, column 1 lines 12-18).

3. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taki (U.S. Patent 596665) in view of Deutsch et al. (U.S. Patent 5590410).

Regarding **claim 20**, Taki teaches the base unit is coupled to the external telephone circuit (column 3 lines 45-49), however fails to expressly specify the external telephone circuit as the PSTN. Deutch et al. disclose a base unit is coupled to the PSTN (18, 12 FIG.1). Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to have the Taki's base unit coupling to the PSTN taught by Deutsch et al. to establish communications between base unit and remote unit in a telephone system (column 1 lines 63-67).

Allowable Subject Matter

4. Claims 8-9, and 16-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edith M Chang whose telephone number is 7033053416. The examiner can normally be reached on M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 7033054714. The fax phone numbers for the organization where this application or proceeding is assigned are 7038729314 for regular communications and 7038729314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 7033054800.

Edith Chang
September 24, 2003


STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600